

IN THE CLAIMS:

Please cancel claims 35-37 without prejudice to or disclaimer of the subject matter recited therein.

Please amend claims 1, 18 and 27 as follows:

LISTING OF CURRENT CLAIMS

Claim 1. (Currently Amended) A structure of multi-tier wire bonding for high frequency integrated circuit, comprising:

a first electronic device, comprising:

a wire-bonding surface;

a first carrier surface, arranged on the opposite side of the wire-bonding surface, surface;

at least a signal bonding pad, located at the border of the wire-bonding surface; and

at least a coplanar bonding pad, located at the wire-bonding surface and surrounding the signal bonding pad;

and

a second electronic device, comprising:

a second carrier surface, abutted to the first carrier surface, having a border portion of the second carrier surface not covered by the first carrier surface and surrounding the first carrier surface;

a plurality of leads, being arranged at the border portion of the second carrier surface and being positioned in correspondence to the signal bonding pad and the coplanar bonding pad; and

a plurality of metal wires, including at least a signal wire and a plurality of ground wires,

wherein the signal wire is electrically connected between the signal bonding pad and the lead corresponding to the signal bonding pad, the ground wires are electrically connected between the coplanar bonding pads and a linear bonding pad which is the border portion of the second carrier surface surrounding the first carrier surface.

Claim 2. (Original) The bonding wire structure according to claim 1, wherein the signal wire and the ground wires are interlaced arranged.

Claim 3. (Original) The bonding wire structure according to claim 1, wherein the coplanar bonding pad is a U-shaped structure, the concave side of the U-shaped structure surrounds the signal bonding pad and the convex side is facing to the signal bonding pad.

Claim 4. (Original) The bonding wire structure according to claim 3, wherein two ground wires are arranged symmetrically at the convex side of said coplanar bonding pad.

Claim 5. (Original) The bonding wire structure according to claim 4, wherein two ground wires are electrically connected to the second carrier surface.

Claim 6. (Original) The bonding wire structure according to claim 5, wherein two pairs of ground wires are arranged respectively and symmetrically at the two sides of said concave side of the U-shaped structure.

Claim 7. (Original) The bonding wire structure according to claim 6, wherein the two proximal ground wires are electrically connected to the second carrier surface.

Claim 8. (Original) The bonding wire structure according to claim 7, wherein the two distal ground wires are electrically connected to the leads.

Claim 9. (Original) The bonding wire structure according to claim 1, wherein the coplanar bonding pad is a U-shaped structure, and a concave side of the U-shaped structure is facing to the leads.

Claim 10. (Original) The bonding wire structure according to claim 9, wherein two grounded wires are arranged respectively at the two sides of said concave side of the U-shaped structure.

Claim 11. (Original) The bonding wire structure according to claim 10, wherein each of the two ground wires electrically connects to the second carrier surface.

Claim 12. (Original) The bonding wire structure according to claim 11, wherein four ground wires are located at the concave side of said U-shaped structure.

Claim 13. (Original) The bonding wire structure according to claim 12, wherein the two proximal ground wires located close to the center of concave side of the U-shaped structure are electrically connected to the second carrier surface.

Claim 14. (Original) The bonding wire structure according to claim 13, wherein said two distal ground wires are electrically connected to the grounded leads.

Claim 15. (Original) The bonding wire structure according to claim 13, wherein said signal wire and said ground wires are interlaced arranged.

Claim 16. (Original) The bonding wire structure according to claim 10, wherein two ground wires are symmetrically located to the concave tip of the U-shaped structure.

Claim 17. (Original) The bonding wire structure according to claim 10 wherein said two ground wires electrically connect to the grounded leads.

Claim 18. (Currently Amended) A structure of multi-tier wire bonding for high frequency integrated circuit, comprising:

at least one high frequency signal bonding pad located at a chip side;

at least one ground coplanar bonding pad surrounding said high frequency signal bonding pad;

a plurality of leads located at a package side; and

at least a ground surface;

wherein said high frequency signal bonding pad is connected to a corresponding lead of the package side using normal bonding, and there are at least two ground loops comprise a first ground loop and a second ground loop, the first group loop is closer to said high frequency signal bonding loop pad than the second ground loop.

Claim 19. (Original) The bonding wire structure of claim 18, wherein said first ground loop is started at the first row of said ground bonding pad and said second group loop is started at the second row of said ground bonding pad, the first row is closer to the ground surface than the second row.

Claim 20. (Original) The bonding wire structure of claim 19, wherein the two ground wires of said first set ground loop are formed by reverse bonding method.

Claim 21. (Original) The bonding wire structure of claim 20, wherein the two ground wires of said second ground loop are formed by normal bonding method.

Claim 22. (Original) The bonding wire structure of claim 20, wherein the two ground wires of said second ground loop are formed by reverse bonding method.

Claim 23. (Original) The bonding wire structure of claim 22, wherein said first ground loop and said second ground loop are interlaced arranged around the high frequency signal bonding.

Claim 24. (Original) The bonding wire structure of claim 23, further comprising a third ground loop having two ground wires, wherein the third ground loop is neighbor to the high frequency signal bonding, said second ground loop is closer to said high frequency signal bonding than the third ground loop.

Claim 25. (Original) The bonding wire structure of claim 24, wherein the third ground loop starts from the second row of said ground coplanar bonding pad.

Claim 26. (Original) The bonding wire structure of claim 25, wherein the two ground wires of said third ground loop are formed by normal bonding method.

Claim 27. (Currently Amended) The bonding wire structure of claim 26, wherein said ground coplanar bonding pad is a U-shaped structure and a convex side of said said U-shaped structure facing said ground surface and the concave side of said said U-shaped structure surrounds said high frequency signal bonding pad.

Claim 28. (Original) The bonding wire structure of claim 27, wherein the two ground wires of the first ground loop each has an end locates at the ground coplanar bonding pad.

Claim 29. (Original) The bonding wire structure of claim 28, wherein the two ground wires of the second ground loop each has an end locates oppositely at a side of the concave side of said ground coplanar bonding pad.

Claim 30. (Original) The bonding wire structure of claim 29, wherein the two ground wires of the third grounded loop each has an end locates oppositely at a side of the concave side of said ground coplanar bonding pad.

Claim 31. (Original) The bonding wire structure of claim 26, wherein the concave side of said ground coplanar bonding pad is facing said ground surface.

Claim 32. (Original) The bonding wire structure of claim 31, wherein the two ground wires of the first ground loop are respectively arranged at the two opposite sides of the concave side of said ground coplanar bonding pad.

Claim 33. (Original) The bonding wire structure of claim 32, wherein the second and the third ground loops are arranged at the convex side of said ground coplanar bonding pad.

Claim 34. (Original) The bonding wire structure of claim 21, wherein the concave side of said ground coplanar bonding pad is facing said ground surface.

Claims 35-37. (Canceled)